Geographic Information Systems (GIS)

GIS: Overview/Modeling/Planning

GIS: Overview/Modeling/Planning

- Formation of the GIS Task Force

- Research the various GIS users in VDH

- Consolidate ESRI (ArcView family of products) licenses under one VDH master license

- Share data

- Benefit from experience of others

GIS: Overview/Modeling/Planning

- GIS is being used in various offices, districts, and programs within VDH
- Current use is coordinated within the individual office, district, or program
- Some collaboration occurs within VDH
- Some collaboration occurs with other agencies
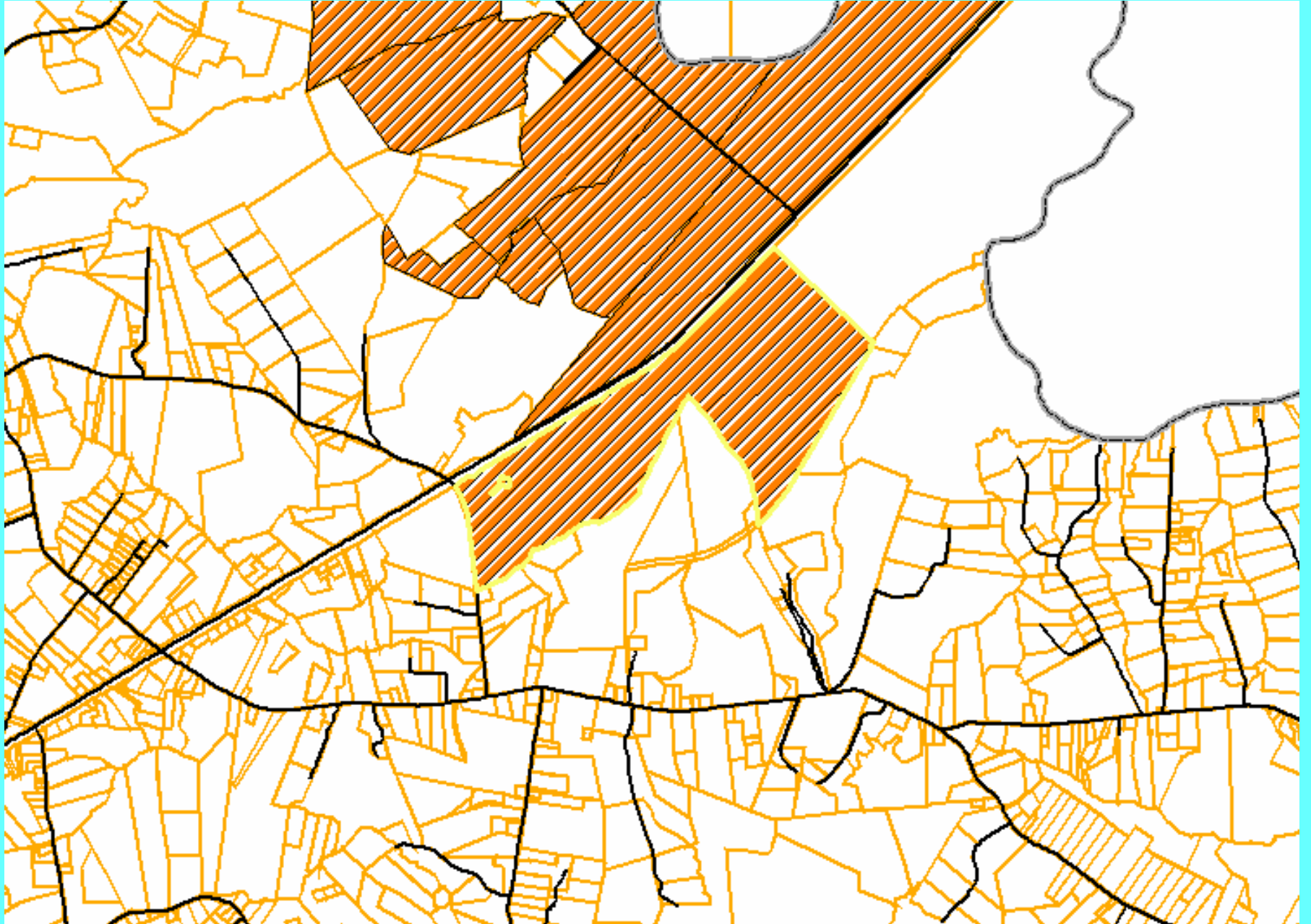
Biosolids GIS

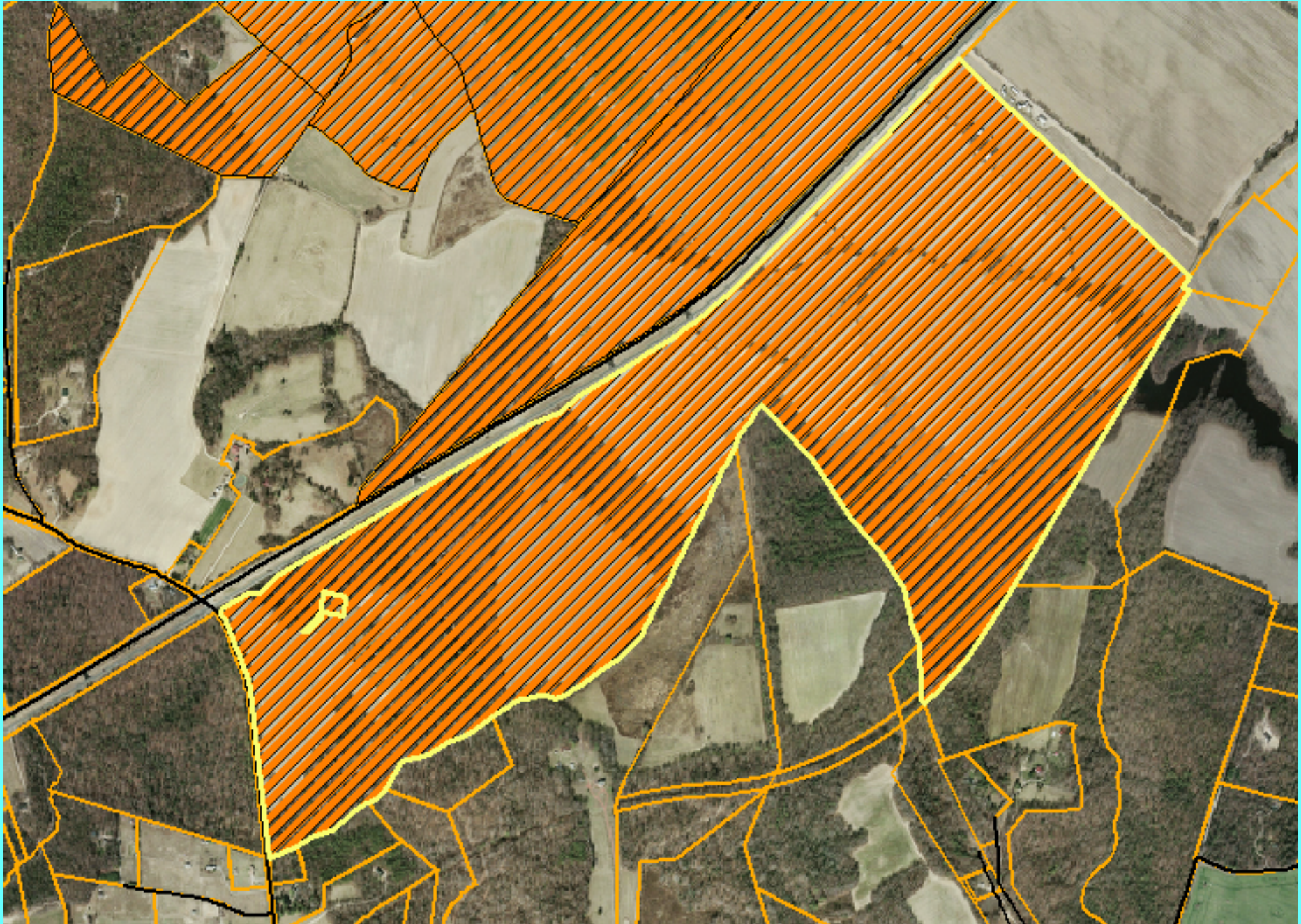## Division of Wastewater Engineering
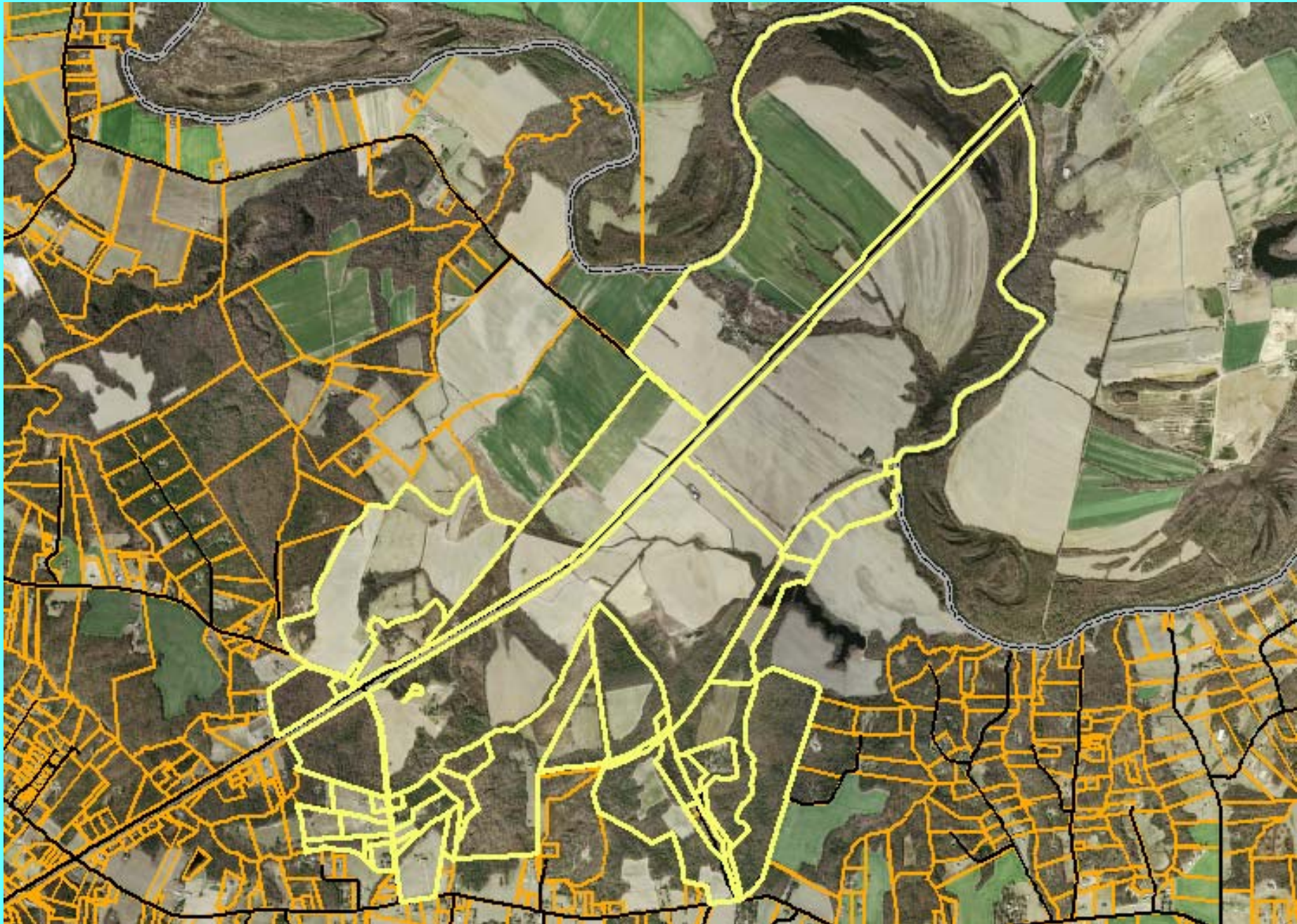
Dr. Cal Sawyer, Director

HANOVER COUNTY
OVERVIEW
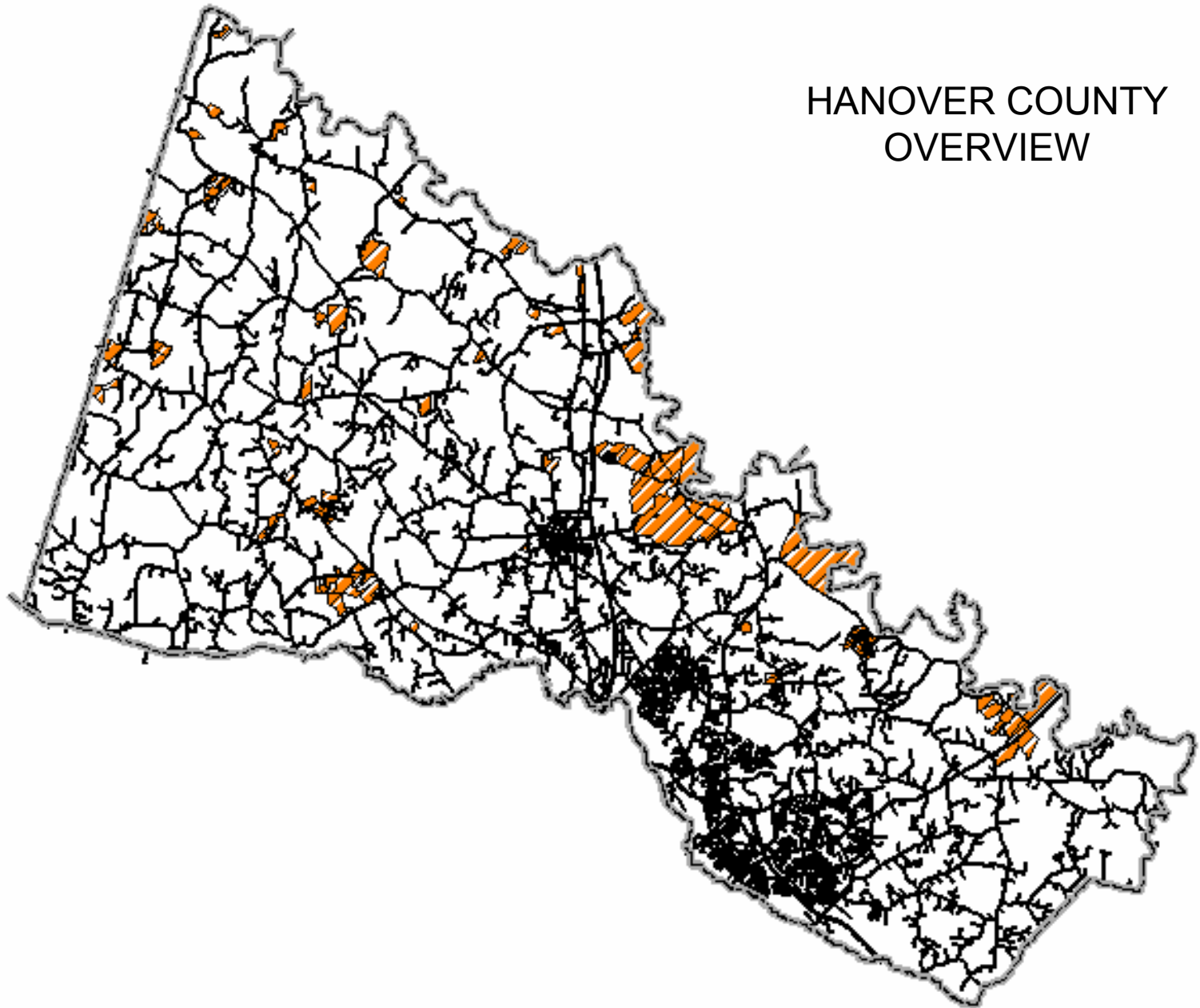
BROADDUS SITE

BROADDUS SITE

PROPERTIES WITHIN 1000' OF BROADDUS SITE

Properties within 1000' of Broaddus site

| GPIN	OWNERNAME	MAILINGADD	CITY_STATE	ZIP	ZONING	TOTAL VALUE	ACRES
			MECHANICSVILLE VA	23111	A-1	178,100	6.00
			MECHANICSVILLE VA	23111	A-1	332,500	10.00
			MECHANICSVILLE VA	23111	A-1	$8,600	26.00
			MECHANICSVILLE VA	23116	A-1	127,000	2.17
			MECHANICSVILLE VA	23111	A-1	$91,600	2.78
			MECHANICSVILLE VA	23111	A-1	165,200	4.56
			MECHANICSVILLE VA	23111	A-1	223,100	9.98
			MECHANICSVILLE VA	23111	A-1	201,200	7.80
			MECHANICSVILLE VA	23111	A-1	187,200	2.00
			MECHANICSVILLE VA	23111	A-1	$18,100	44.20
			WALKERTON VA	23177	A-1	130,300	1.00
			WALKERTON VA	23177	A-1	259,100	169.93
			MECHANICSVILLE VA	23111	A-1	124,100	2.08
			MECHANICSVILLE VA	23111	A-1	416,800	24.12
			MECHANICSVILLE VA	23111	A-1	$500	1.08
			MECHANICSVILLE VA	23111	A-1	205,300	10.12
			MECHANICSVILLE VA	23116	A-1	$96,100	10.89
			MECHANICSVILLE VA	23111	A-1	127,800	1.50
			MECHANICSVILLE VA	23116	A-1	398,700	25.89
			MECHANICSVILLE VA	23111	A-1	$70,500	5.38
			MECHANICSVILLE VA	23111	A-1	$91,900	10.02
			MECHANICSVILLE VA	23111	A-1	$92,300	10.01
			MECHANICSVILLE VA	23111	A-1	719,000	102.42
			MECHANICSVILLE VA	23111	A-1	$10,900	27.00
			MECHANICSVILLE VA	23111	A-1	472,900	419.20
			MECHANICSVILLE VA	23111	A-1	$71,600	152.00
			MECHANICSVILLE VA	23111	A-1	$57,400	128.70
			MECHANICSVILLE VA	23111	A-1	$1,300	2.52
			MECHANICSVILLE VA	23111	A-1	$57,400	128.70
			MIDLOTHIAN VA	23113	A-1	$2,000	0.79
			MECHANICSVILLE VA	23111	A-1	$88,800	10.00
			MECHANICSVILLE VA	23111	A-1	254,100	4.90
			MECHANICSVILLE VA	23111	A-1	$88,800	10.00
			MECHANICSVILLE VA	23111	A-1	350,000	14.47
			MECHANICSVILLE VA	23111	A-1	$20,700	57.70
			MIDLOTHIAN VA	23113	A-1	528,100	819.78
			MECHANICSVILLE VA	23111	A-1	$31,000	86.10
			MECHANICSVILLE VA	23111	A-1	$37,800	6.00
			MECHANICSVILLE VA	23111	A-1	370,400	576.00

2,933.79

200' BUFFER AROUND BUILDINGS
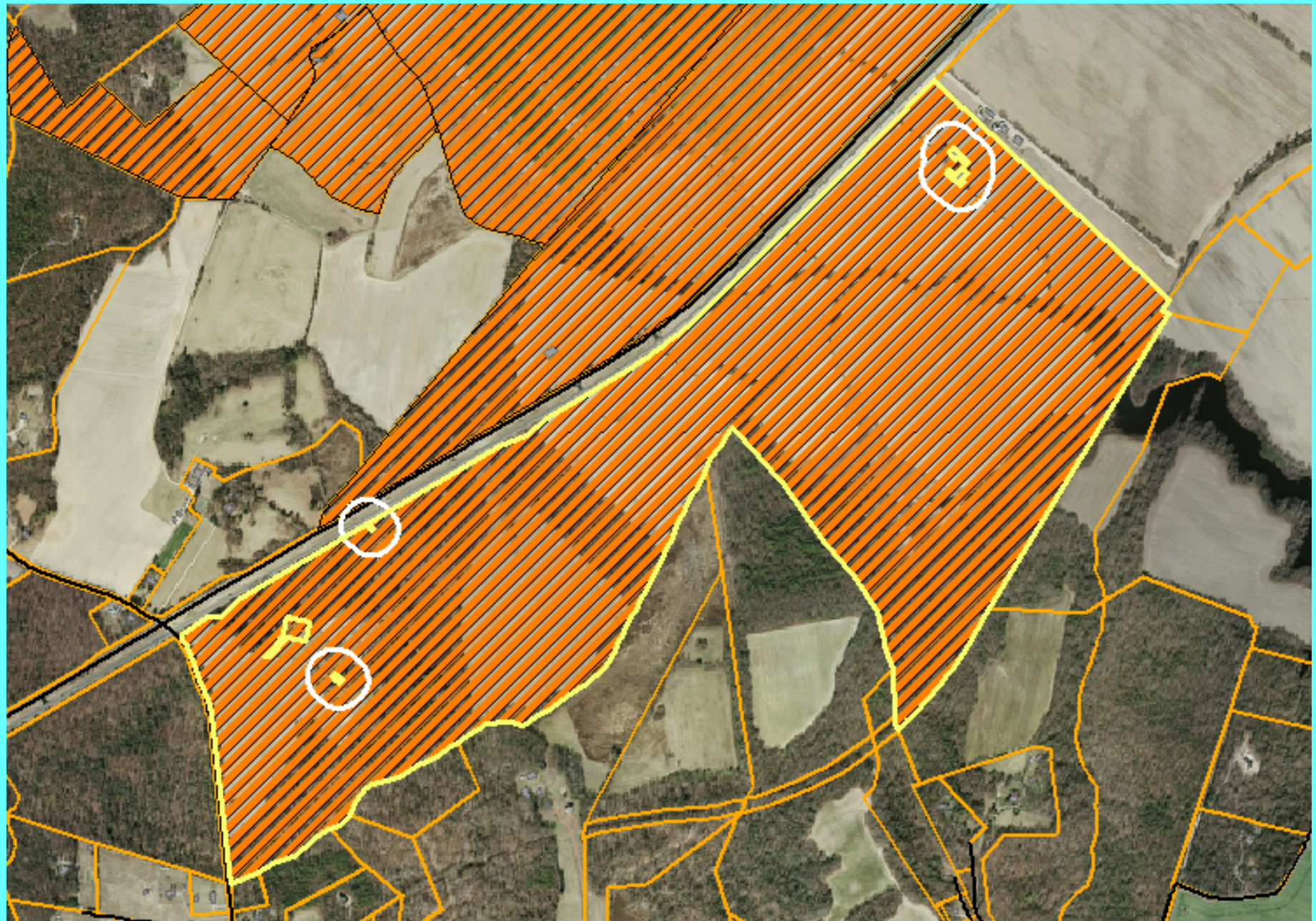
100' BUFFER AROUND WATER
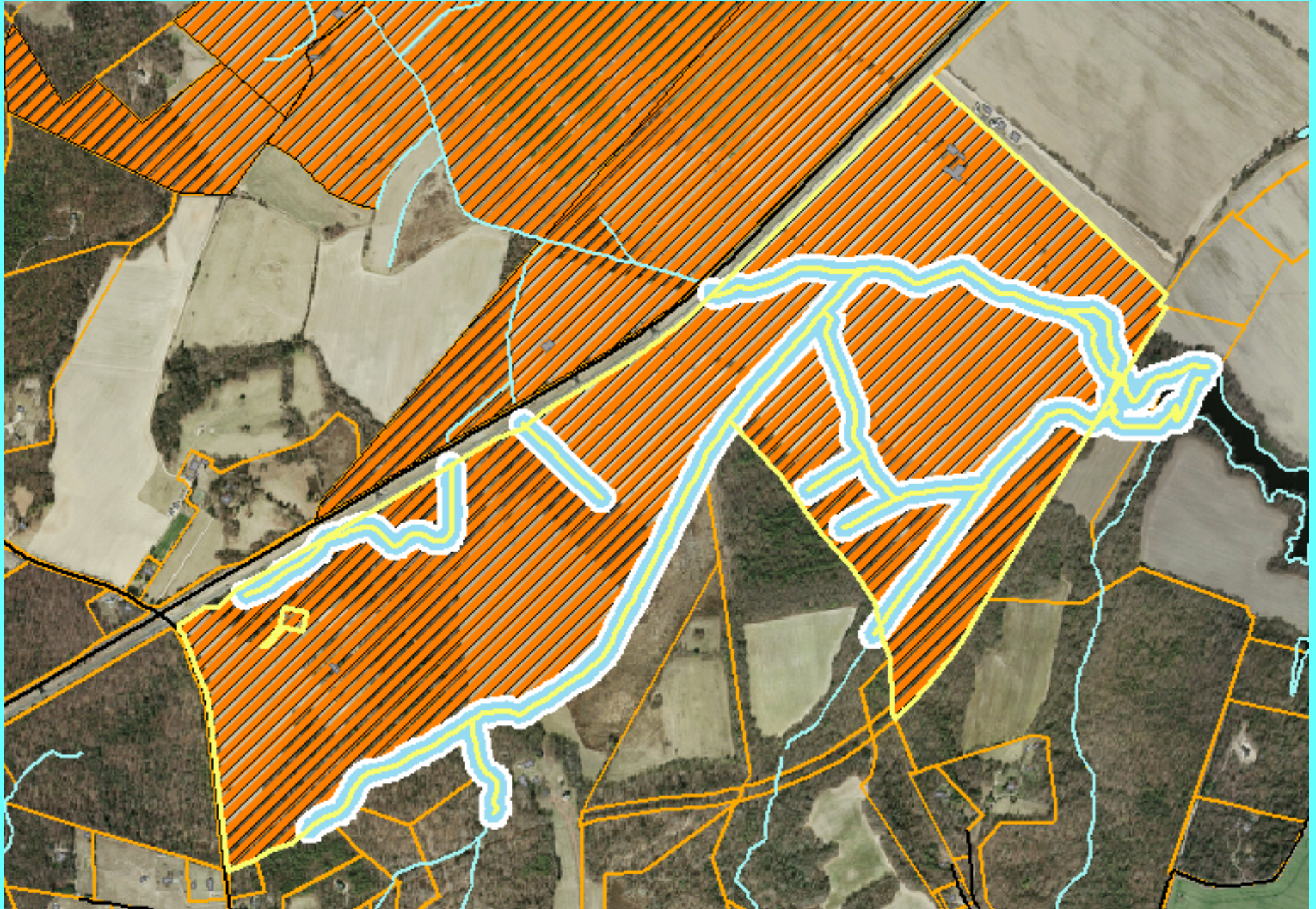
Office of Drinking Water

- ArcIMS
  - Enables map data to be displayed via a browser
  - Still developmental
  - Enables user selection of map features

HANOVER COUNTY
OVERVIEW
(with public water supplies)
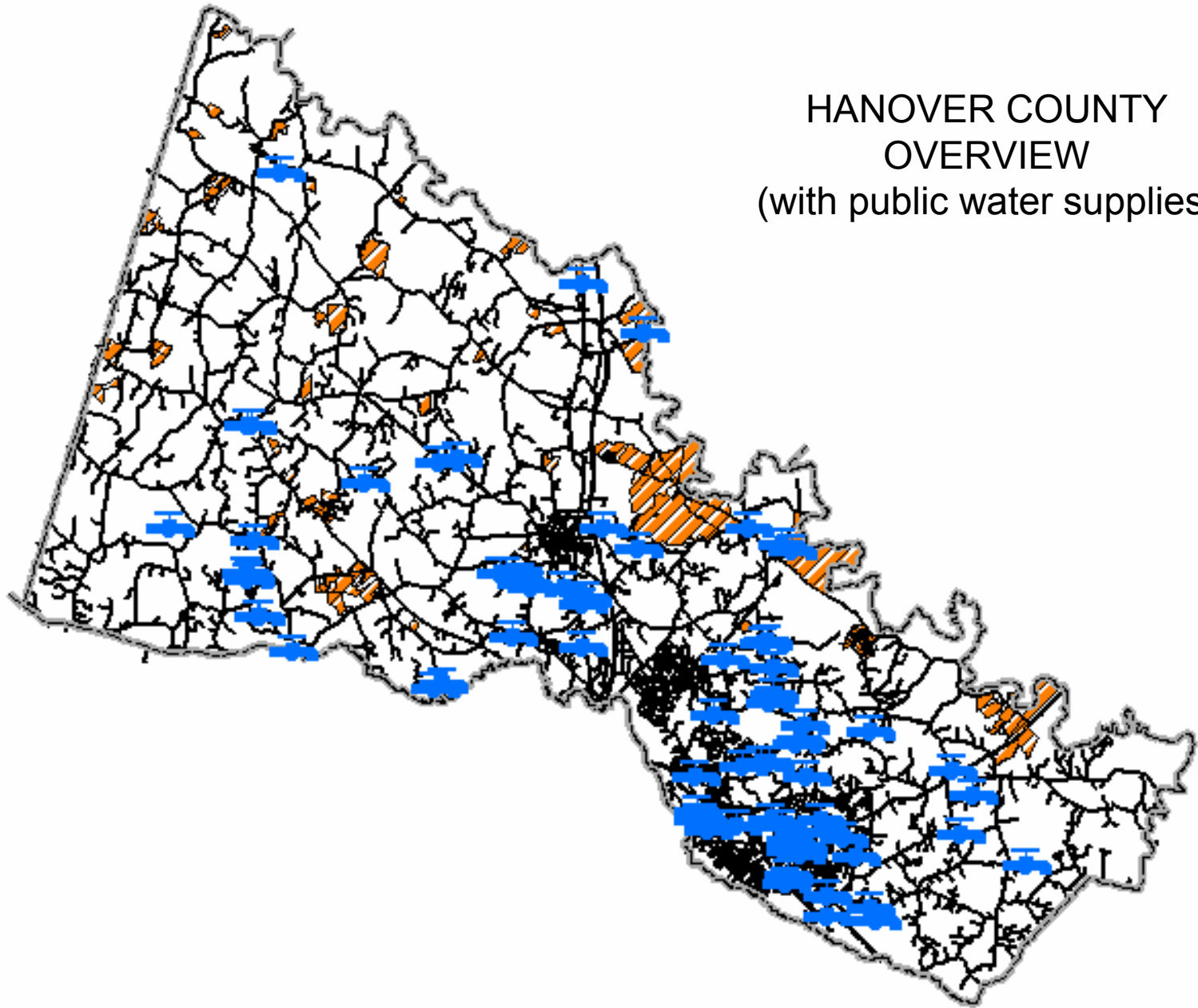
GIS Planning

GIS Program Objectives

1. Create a VDH GIS Enterprise
2. Develop VDH GIS Management Practices
3. Elevate the Expertise of the VDH GIS User Community and Support Staff
4. Maintain a Responsive GIS Technology Service Delivery Model
5. Stewardship of Information

GIS Planning
System Configuration Concept

VGIN DATA REPOSITORy

File Server
Windows/Unix/Novell

ArcSDE & Database Server

ArcIMS Server
Windows Server

Web Server
Windows Server

GIS Power User

Note:
Locally Stored User Data

GIS Client/User

Pre-Defined Data Transfer Process
(to and from VITA)
(Other Agencies will do the same thing with their data)
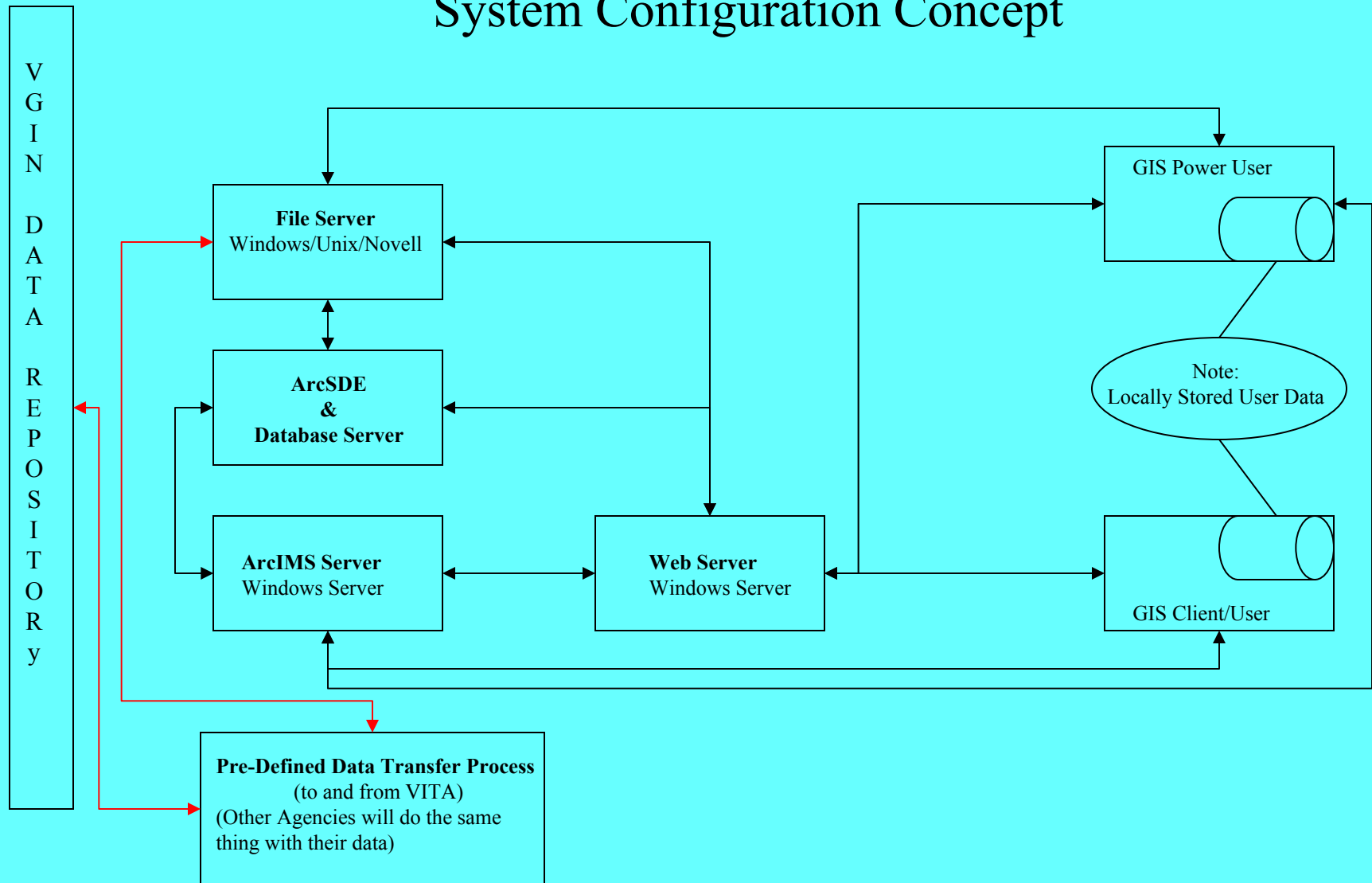
GIS Planning
Data Update Concept

```
Production                          ┌─────────────────────┐
Database Server                     │ Data Collection     │
                                    │   Street &          │
                                    │   Address           │
                                    └─────────────────────┘

Process – Geo-
Coding & Location  ◄──────
Assignment
        │
        ▼                           ┌─────────────────────┐
Staging/Test QC  ◄──                │ Data Collection     │
Database Server                     │   GPS               │
                                    └─────────────────────┘

Process – Data
Cleansing &
Quality Control                     ┌─────────────────────┐
                                    │ Data Collection     │
                                    │   Lats & Longs      │
                                    └─────────────────────┘

                                    ┌─────────────────────┐
                                    │ Data Collection     │
                                    │   Other Methods     │
                                    └─────────────────────┘
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Production Database Server

Process – Geo-Coding & Location Assignment

Staging/Test QC Database Server

Process – Data Cleansing & Quality Control

Data Collection Street & Address

Data Collection GPS

Data Collection Lats & Longs

Data Collection Other Methods

GIS: Overview/Modeling/Planning

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